

## What the lab receives:

- A.** From uploaded files the restoration is fully milled to your designed shape and precoloured to your required shade with lighter cusps ready for final stain and glaze. The bite and contacts may need final adjustments.
- B.** From models, fully milled to either your wax-up or as designed at Bristol Crown. Precoloured to your required shade with lighter cusps ready for final stain and glaze. The bite and contacts may need final adjustments.

## What the lab needs to do:

- 1.** Adjust the bite and contacts. The bite is probably best onto a polished Zirconia island. NB. Loose contacts will become firm contacts with the layer of glaze powder. Any lost contacts or design errors can be retrieved with the addition of a small layer of porcelain without compromising the final restoration. Also check the marginal fit and adjust if necessary. Next sandblast all surfaces with 50 micron  $\text{AlO}_2$  at around 4-5 bar. Finally clean off any remaining particles of  $\text{AlO}_2$ .
- 2.** Fix any detailed stains (such as fissure stain or light stress cracks etc) at around  $800^\circ\text{C}$ . Next flow any colour enhancing stains onto the crown (maybe to create bluer cusps/ whiter cusp tips/darker cervical stain/ bring up the main body colour etc) Coloured stain can be mixed with glaze powder to create a 'blush' effect rather than streaky stain marks or well recommended is the GC lustre stain kit which can match Vita stains and more.
- 3a.** Finally cover with a thin layer of glaze as necessary and fire using normal glaze temperatures as a guide. However, since Zirconia is heat resistant, perhaps for around 4 minutes longer (vary as required). Alternatively slow the heat rate down and hold for less time.
- 3b.** Alternatively, after fixing any fissure stain, you can simply polish the crown with diamond polishing paste to achieve a high lustre.

## The Material itself:

ZrAdvance™ is made from a high translucency Zirconia. There are two main factors affecting the translucency of Zirconia:

- i. Grain size and structure – the smaller and more homogenous the particles are, the greater the translucency.
- ii. Aluminium Oxide – the less  $\text{AlO}_2$  in the Zirconia the better the translucency. However,  $\text{AlO}_2$  is responsible for aging resistance, so really we need to keep it.

Some manufacturers are offering Zirconia with reduced or even NO  $\text{AlO}_2$  at cheaper prices. Some manufacturers request higher sintering temperatures, which also improves translucency BUT weakens the material even more!

So... in these materials with the shortcuts employed, flexural strength will be lower and will also decrease considerably ZrAdvance™ uses high quality Zirconia with certain refinements to the grain size and crystal structure. This maintains the high flexural strength and also maintains its aging resistance while increasing the translucency by around a further 20%.

# ZrADVANCE™

## Advantages of a full Zirconia crown:

- 1.** An allceramic alternative to full cast or metal occlusal crowns which is still strong enough to resist forces applied by bruxers and grinders who might well have destroyed other restorations.
- 2.** At 1200 +/-50 MPa, ZrAdvance™ can be used for both single and bridge cases.
- 3.** Conventional cementation with non expanding resin modified glass ionomer (Glass ionomer Fuji GC or 3M Espe Rely X resin ionomer).
- 4.** Virtually unbreakable AND chip-proof.
- 5.** Designed and milled using the latest CAD/CAM technology.
- 6.** Supplied with a no quibble 5 year guarantee against failure.
- 7.** No biocompatibility issues... Zirconia is a proven tissue friendly material for oral use.
- 8.** Can be used in cases where the prep cannot be reduced by much. Saves tooth structure.
- 9.** Shoulder prep not required.
- 10.** Can be designed with a veneer cutback for porcelain. This gives you superior strength as well as the aesthetics of your veneering ceramic.

## Choose ZrAdvance™!

ZrAdvance™ is available from Bristol Crown:

**BristolCrownCo**   
Your Digital Partner



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